

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

**What is claimed is:**

1. A three piece automobile wheel comprising an inner rim; an outer rim  
joined to the inner rim to form the wheel rim; and a center disc attached to the  
5 outer rim,  
wherein inner rim and outer rim surfaces in mutual opposition bend  
inwards to establish a flange section for center disc attachment, and the  
center disc is fixed to the inner rim and outer rim by fastening bolts which  
pass through the flange section of the inner rim and outer rim, and  
10 wherein a trough is provided in the outside wall of the inner rim  
between the flange section and rim flange, the outer side-wall of the trough  
nearest the flange section is disposed off the rim center-plane closer to the  
center disc, a valve opening is provided to attach a valve which passes  
through this outer side-wall, the configuration allows the valve base to be  
15 disposed inside the trough, and an open region is provided in the center disc  
to expose the valve stem, which is attached to the valve opening, outside the  
center disc.
2. A three piece automobile wheel as recited in claim 1 wherein the inner rim,  
20 outer rim, and center disc are aluminum or aluminum alloy.
3. A three piece automobile wheel as recited in claim 1 wherein the inner rim,  
outer rim, and center disc are magnesium or magnesium alloy.
- 25 4. A three piece automobile wheel as recited in claim 1 wherein a through-  
hole region is provided in the flange section of the inner rim and outer rim to  
pass the valve stem, which is attached to the valve opening.
5. A three piece automobile wheel as recited in claim 1 wherein the trough  
30 outer side-wall angle of inclination  $\alpha$  with respect to the rim center-plane is  
15° to 25°.

6. A three piece automobile wheel as recited in claim 1 wherein the depth of the trough near the outer side-wall is greater than or equal to 15mm.
7. A three piece automobile wheel as recited in claim 6 wherein the depth of the trough near the outer side-wall is less than or equal to 35mm.
8. A three piece automobile wheel as recited in claim 1 wherein the centerline distance (d) between the outer side-wall and the flange section is 10mm to 60mm.
9. A three piece automobile wheel as recited in claim 1 wherein the centerline distance (d) between the outer side-wall and the flange section is 10mm to 50mm.
10. A three piece automobile wheel as recited in claim 1 wherein the centerline distance (d) between the outer side-wall and the flange section is 10mm to 40mm.
11. A three piece automobile wheel as recited in claim 1 wherein the depth of the trough is such that the base of the valve does not project out beyond the plane of the rim.
12. A three piece automobile wheel as recited in claim 1 wherein the depth of the trough near the outer side-wall is greater than or equal to 15mm and less than or equal to 35mm.
13. A three piece automobile wheel as recited in claim 1 wherein a valve is attached, which houses an air pressure sensor in the valve base.
14. A three piece automobile wheel as recited in claim 1 wherein the valve base is shaped with one surface disposed along the bottom plane of the trough, the opposing outer surface disposed in a manner which does not project beyond the plane of the wheel rim, and this outer surface is a smooth

surface which inclines slightly away from a shape which aligns along the plane of the rim.